



2023

Table of Contents

List	of Tables	2
List	of Figures	3
Abo	out PacifiCorp	4
1.	Introduction	5
2.	Description Of Pilot Program Measure	5
2.1	Measure Elements	5
2.2	Objectives	6
2.3	Timelines	6
2.4	Market Baseline Assumptions	7
	Current EV Penetration and Charging Infrastructure	7
	Current Situation	8
2.5	Major Performance Milestones	8
2.6	Participation Eligibility & Requirements	9
3.	Market Barriers & Mitigation Strategies	9
4.	Performance Categories	10
5.	Technical Requirements	10
5.1	Electric Vehicle Requirements	10
5.2	Electric Vehicle Supply Equipment (EVSE) Requirements	10
6.	Program Development Process	11
6.2	Stakeholder Engagement Process	11
6.3	Efforts to Coordinate with Related State Programs	11
7.	Alignment with the Company's Long-Term TE Strategy	12
8.	Program Budget	12
8.1	Estimated Costs, Incentives, Program Delivery, Evaluation, Marketing and Administration	12
9.	Learning Objectives	13
10.	Data Collection and Reporting	13
App	pendix A: Suggested Scoring Criteria	14
App	endix B: Stakeholder Feedback	15
Lis	st of Tables	
Tab	le 1. Timeline of Program Implementation Activities	6
Tab	le 2. Potential Market Barriers and Mitigation Strategies	9

Table 3. Performance Categories Discussed in TE Plan	10
Table 4. Communities Grant Program Budget	12
Table 5. Scoring Criteria	
List of Figures	
Figure 1. Historical (2013–2021) and Forecast (2022–2031) EV Penetration in Washington Ser	vice Area8

About PacifiCorp

PacifiCorp is a multijurisdictional, vertically integrated utility that serves nearly two million customers in six western states: California, Idaho, Oregon, Utah, Washington, and Wyoming. In Washington, PacifiCorp serves approximately 140,000 customers throughout Yakima, Walla Walla, Columbia, Benton, Cowlitz, and Garfield counties. The company's generation and transmission systems span the West and connect customers to safe, reliable, affordable, and increasingly renewable electricity. Our integrated transmission

system connects thermal, hydroelectric, wind, solar, and geothermal generating facilities with markets and loads. The diversity of this integrated system benefits all of PacifiCorp's customers in all six states.

PacifiCorp's large regional footprint enables delivery of low-cost generation from some of the best wind and solar sites in the country and the Company remains actively engaged in finding ways to leverage the benefits of geographic diversity for our customers as the Company develops and implement plans to deliver the targets set forth in Washington's Clean Energy Transformation Act (CETA).



Over the past 13 years, PacifiCorp has successfully reduced its greenhouse gas (GHG) emissions and improved reliability while simultaneously delivering energy cost savings to our customers. The Company has achieved these results by collaborating with others and through the visionary and collaborative efforts of our own generation, transmission, information technology, and energy supply management teams. PacifiCorp has been a key player in the creation of an open and connected western grid. All these factors have brought PacifiCorp into a very favorable position to achieve Washington's decarbonization goals.

1. Introduction

In early 2019, PacifiCorp d/b/a Pacific Power & Light Company initiated a number of pilots to reduce transportation electrification barriers by addressing the high upfront costs. This consisted of launching three specific pilot programs to the market that were identified as key pathways to encouraging adoption of electric vehicle supply equipment (EVSE). The pilot programs added necessary infrastructure in the service area where low adoption of electric vehicles exists with limited access to charging. In addition, the pilot programs uncovered key findings that highlighted the importance of TE programs in PacifiCorp service area.

Specifically, PacifiCorp provided grant funding toward nonresidential customer EV charging infrastructure projects. This included awarding 20 grants with a total of 10 projects completed to date. One project, as of November 2021, decided to not proceed. This resulted in a total of 19 projects funded. Overall, the pilot expanded access to EVSE in PacifiCorp's service area and appears to have enabled earlier deployment of EVSE than would have otherwise occurred without the grant funding opportunities. Furthermore, this pilot program continues to see an increase in usage of electric vehicle charging stations since its inception showing the growth and need related to charging¹.

Feedback from discussions with Washington Equity Advisory Group (EAG), during the drafting of the Clean Energy Implementation Plan² (CEIP) highlighted the potential impact of a grant program for named communities encouraging PacifiCorp to continue offering and expanding the grant program. Since 2021, PacifiCorp has continued to host a series of discussions and engagements with EAG members, which has led to the development of a grant program that would benefit and serve named communities.

On May 20, 2022, PacifiCorp filed its 2022 "Washington State Transportation Electrification Plan" (TEP or Plan) with the Washington Utilities and Transportation Commission (Commission) under Docket UE-220359. PacifiCorp supplemented its original filing with an addendum filed on September 28, 2022. This is PacifiCorp's first filed TEP since enabling legislation was enacted in 2019. The Commission acknowledged the plan on October 27, 2022, enabling PacifiCorp to begin development of the proposed programs in the TEP inclusive of a Communities Grant Program.³ This program would broaden the previous grant program by allowing for multiple grant project types to apply as long as benefits accrue within named communities. The overall goal is to provide exploratory grants that will help to plan, promote, or deploy electric transportation technology and projects within Named Communities. In addition, funds will also be allocated to support grant writing assistance for customers as they pursue additional funding opportunities through state and federal funding.

2. Description Of Pilot Program Measure

2.1 Measure Elements

The EAG and other stakeholders were consulted on the grant program design to establish an inclusive grant program for named communities as well as offering grant writing assistance to customers. Preliminary ideas for grant eligibility include covering 100% of costs and including all aspects of electric mobility projects—from

¹ PacifiCorp. (2021). Washington Transportation Electrification Plan Final Report. <u>UTC Case Docket Document Sets | UTC (wa.gov)</u>

² PacifiCorp, "PacifiCorp Clean Energy Implementation Plan" (December 30, 2021),

www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/ceip/PAC-CEIP-12-30-21_with_Appx.pdf.

³ PacifiCorp. (2022). Washington Transportation Electrification Plan. UTC Case Docket Document Sets | UTC (wa.gov)

infrastructure installation and adoption of different modes of electric transportation to outreach and educational campaigns and events.

- Grant cycle would occur annually each year with an open and close cycle
- Grants applications would be evaluated by a third-party independent evaluator
- Selection committee would be comprised of representation from Named Communities
- Applications would be scored according to a set of criteria (see Appendix A: Suggested Scoring Criteria)
- Projects would have two to three years to complete
- Funding would be made available at the beginning of the project
- Quarterly and annual reporting would be completed by grant awardees

2.2 Objectives

PacifiCorp anticipates that offering a grant program focused on named communities may achieve four main objectives:

- Reduce costs of ownership by covering up to 100% of the eligible costs of studying, planning, promoting, or deploying electric transportation technology and projects
- Encourage traditional industries to adopt and shift towards transportation electrification
- Raise awareness and education around transportation electrification for customers by highlighting what transportation electrification can do
- Remove barriers to applying for grant funding
- Provide a simple, flexible, and equitable grant funding mechanism

2.3 Timelines

Table 1. Timeline of Program Implementation Activities

Wa	Washington Community		Υ	1			Y	2			Υ	3			Υ	4			Υ	5	
	ant Program Timeline	Q1	Q2	Q3	Q4																
1.0 L	aunch steps																				
1.1	Develop application portal																				
1.2	Develop grant program materials (application, terms and conditions, etc.)																				
1.3	Develop program implementation																				
1.4	Launch outreach																				
1.5	Open application window																				_

2.0 Application Screening

	Application window											
2.1	opens											1
	Application window											
2.2	closes											
3.0 E	valuation & Selection			<u> </u>	<u> </u>		<u> </u>		<u> </u>			
	Develop selection											
3.1	committee											
	Conduct initial											
3.2	screening											
	Host selection											
	committee decision											
3.3	meetings											
	Selection completed											
3.4	for grantees											
4.0 F	unding Awarded											
	Executive approval											
4.1	of awardees											
4.2	Notify recipients											
	Grant agreements											
4.3	executed											
	Prepayment											
4.4	available											
4.5	Project delivered											
	Project closeout											
4.6	executed											

2.4 Market Baseline Assumptions

Current EV Penetration and Charging Infrastructure

EV adoption lags behind other areas of the state within PacifiCorp's Washington service area. Less than 1% of the state's 114,600-plus EVs reside within the service area. In Washington as a whole, there are nearly 14.8 EVs per 1,000 residents, but in PacifiCorp's service there are only about 5.1 EVs per 1,000 residents. However, this difference in EV adoption is not unique to PacifiCorp's Washington territory. Across the nation, rural areas and smaller cities and towns tend to lag behind urban areas in EV penetration.

Figure 1. Historical (2013–2021) and Forecast (2022–2031) EV Penetration in Washington Service Area demonstrates historical data and future modeling of EV penetration rates within PacifiCorp's Washington service area. Though the adoption rate is expected to accelerate over the next decade, the curve lags behind Washington as a whole by several years. Not only is EV adoption slow in PacifiCorp's Washington service area, but the charging infrastructure is relatively immature—an issue compounded by the fact that rural drivers often travel significantly greater daily distances than their urban counterparts. There are only a handful of charging stations outside Yakima and Walla Walla and only one of those stations is a DC fast charger

^{4.} New information collected as of Jan 2023. US Department of Energy, Office of Energy Efficiency and Renewable Energy, Alternative Fuels Data Center: Electric Vehicle Charging Station Locations (2021), https://afdc.energy.gov/fuels/electricity_locations.html#/find/nearest?fuel=ELEC.

(DCFC). The remainder are Level 2 chargers. As of late 2021, there were a total of 32 public charging stations offering 65 ports within PacifiCorp's Washington service area.

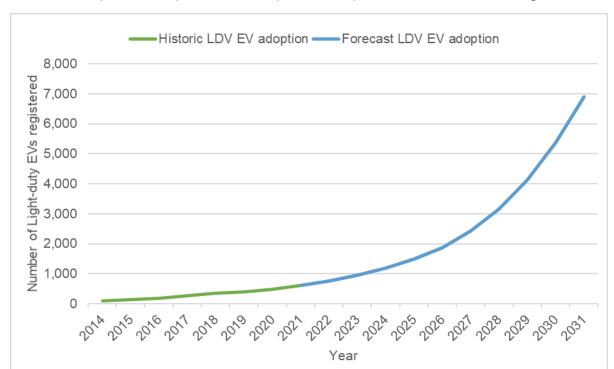


Figure 1. Historical (2013–2021) and Forecast (2022–2031) EV Penetration in Washington Service Area

Current Situation

Currently, residents within PacifiCorp service area have limited access to electric vehicle programs such as incentives, rebates, and grants. Many residents do not have reliable transportation or the funds to acquire electric vehicles and depend on public, low-cost, sometimes free transportation services to get them from location to location. These transportation services help individuals meet some of their most basic needs including attending appointments for social services, getting to the nearest healthcare facility for care, to transporting individuals from job site to job site in more rural agricultural areas. Organizations that provide transportation services in these communities include People for People, Pahto Public Passage, local school districts, and various large agriculture companies.

2.5 Major Performance Milestones

PacifiCorp proposes the following performance milestones as it relates to achieving steps towards program success.

- Grant program launched and first grant cycle open
- First round of grant agreement signed
- First round of grants completed
- Second round of grant agreement signed
- Second round of grants completed

- Third round of grant agreement signed
- Third round of grants completed
- Program evaluation completed

2.6 Participation Eligibility & Requirements

PacifiCorp suggests the following eligibility and requirements for the proposed program.

- Open to non-residential customers in Washington that focus on serving named communities
- Benefits accrue to and within named communities, which includes "highly impacted communities" and vulnerable populations.
- Eligible expenses would cover costs associated with studying, planning, promoting, and marketing, or deploying electric transportation infrastructure, technology, vehicle purchase or lease and projects. Projects must benefit residential customers. Other eligible expenses include project management costs, upfront network subscription costs, ongoing operations and maintenance costs, ongoing network subscription or other software costs and co-marketing projects with PacifiCorp.
- Ineligible expenses would include energy costs, insurance, private fleet costs, auxiliary equipment costs (e.g., solar systems, battery storage systems) and costs that would occur without the project (e.g., staff salaries, landscaping)
- Selected applicants will be required to provide reports throughout the process on a quarterly basis
- For projects installing infrastructure, recipients would be required to share data with the scheduled reporting and allow PacifiCorp to be the aggregator

3. Market Barriers & Mitigation Strategies

PacifiCorp anticipates the following market barriers and proposes specific mitigation strategies to overcome these barriers.

ier	Description	Mitigation Strategies
	Table 2. Potential Market Barr	riers and Mitigation Strategies

Barrier	Description	Mitigation Strategies
Lack of Awareness of Program	Awareness of the program may be limited initially as the program launches	 Develop pre-launch information that will share when program launches Develop a robust, marketing campaign to utilize multiple resources for program announcement Develop word-of-mouth strategies to ensure sharing of the program
Experiencing supply chain issues	Projects could experience the ongoing supply chain issues impacting the industry	 Allow for flexibility in project timeline as supply chain issues appear Identify list of potential vendors that are able to provide equipment more rapidly than others
Adherence to project completion timelines	Recipients may hit delays outside of supply chain issues	Allow for flexibility in project timeline constraints

	with may push project timelines back	•	Work with recipients to identify solutions to timeline issues
Data is not shared	Recipients forgot or do not adhere to data sharing requirements	•	Work with recipient in the begging to create a direct data link to the electric vehicle supply provider and not require recipient to submit data

4. Performance Categories

Table 3. Performance Categories Discussed in TE Plan

Metric	Discussion
Community-focused efforts and investments (customer benefit indicator in the CEIP)	PacifiCorp proposes to count the number of projects implemented in named communities and estimate the number of beneficiaries from each project.
Participation in PacifiCorp energy and efficiency programs and billing assistance programs (customer benefit indicator in the CEIP)	PacifiCorp proposes to count the number of grant recipients awarded over the lifetime of the program.
Charging adequacy (equitable access)	For those projects installing infrastructure, PacifiCorp will monitor, to the best of the Company's ability, reliability and adequacy of those stations funded by the grant.
Grid Benefits	At this time, these projects will most likely not participate in managed charging initiatives, but PacifiCorp will investigate opportunities to integrate these projects into a program moving forward.
Environmental Benefits	The Company plans to track charging utilization of stations installed and the corresponding greenhouse gas emissions (GHG) associated with the completed charging sessions. In addition, where applicable, for those grants awarded that are purchasing electric vehicles estimated reductions in GHG will also be estimated.

5. Technical Requirements

5.1 Electric Vehicle Requirements

- Battery Electric or Plug-in Hybrid Vehicles capable of charging from the grid includes new or used vehicles
- Capable of charging with standard EVSE
- Electric bikes
- Light duty vehicles including cars, vans, and trucks
- Medium and heavy-duty vehicles including school buses, transit buses, box trucks

5.2 Electric Vehicle Supply Equipment (EVSE) Requirements

EVSE must be selected from the Pacific Power Qualified Products List

- Installation must adhere to Pacific Power safety guidelines at pacificpower.net/ESR
- Smart charger with a network management system (NMS)
- Meet standards for National Electrical Manufacturers Association [NEMA] Type 3R or 4 for outdoor installations; minimum rating of NEMA Type 2 for indoor installations
- Be listed by a nationally recognized test lab to the requirements of UL 2202
- Have an enclosure suitable for the installation location (minimum rating of NEMA Type 3R or 4 for outdoor installations; minimum rating of NEMA Type 2 for indoor installations)
- Conform to Open Charge Point Protocol (OCPP) v1.6 or later
- Provide OpenADR support

EVSE Requirements Continued - DC Fast Charging

- Provide one CHAdeMO and one SAE Combo compliant connection if chargers will be available to the public
- Conform to Open Charge Point Protocol (OCPP) v1.6 or later
- Provide a charging rate of at least 50 kW
- Accept payment from major credit cards
- Be listed by a nationally recognized test lab to the requirements of UL 2251 and UL 2594
- Support installation requirements of National Electric Code article 625

6. Program Development Process

6.2 Stakeholder Engagement Process

Prior to the program application being developed, PacifiCorp engaged a number of stakeholders during development of the TE Plan⁵, which included engagement directly with the Washington Utility Transportation Commission EVSE Working group, the Equity Advisory Group (EAG), and one-on-one conversations with interested stakeholders as well as reaching out to stakeholders via e-mail to solicit feedback and insights into the TE Plan. The TE Plan included an in-depth discussion of this program and potential benefits from the program.

For development of this program application, PacifiCorp hosted working sessions with EAG members to develop, refine and define the grant program. Furthermore, the initial concept and following details were shared with the WUTC EVSE working group⁶. Drafts of the applications were shared with stakeholders on Q1 of 2023 and final feedback received end of Q2 2023. Stakeholder comments are addressed in Appendix B of this program application.

6.3 Efforts to Coordinate with Related State Programs

Grants applications that have already received funding through state grant programs and seek to expand program offerings to PacifiCorp customers by stacking existing grant funds with PacifiCorp's community grant program, will be encouraged to apply.

⁵ PacifiCorp. (2022). Washington Transportation Electrification Plan. <u>UTC Case Docket Document Sets | UTC (wa.gov)</u>

⁶ EAG working sessions occurred Feb, March, April and October of 2022. https://www.pacificorp.com/energy/washington-clean-energy-transformation-act-equity.html

7. Alignment with the Company's Long-Term TE Strategy

PacifiCorp's long-term TE strategy aims to support all customers and organizations that are shifting to using electric vehicles for their personal use and for their fleets with a focus on helping underserved communities electrify their transportation. PacifiCorp is committed to meeting electrification and decarbonization goals through resource planning and customer programs, while also ensuring that the benefits of electrification can be enjoyed by all.

Through grants available to the community the Company can improve access to EV charging infrastructure and reduce the distances between charging stations in the communities that the Company serves. Members of named communities whose lower overall access to electrified transportation is likely further exacerbated by geographical and/or socioeconomic factors. The community grant program will prioritize projects that will increase access to charging infrastructure for named communities.

The Company will explore ways to reduce the barriers to accessing electric vehicle technology through different opportunities such as car shares, electric vehicle ride services and other models. The community grant program provides PacifiCorp with the opportunity to explore and learn from a variety of e-mobility projects that will aim to reduce costs to access EV technology, electrify equitably and reduce GHG emissions.

8. Program Budget

8.1 Estimated Costs, Incentives, Program Delivery, Evaluation, Marketing and Administration

The pilot's estimated budget totals over \$1.2 million for a five-year program⁷. The communities grant program is estimated at about 28% of the proposed TE Plan budget approved in October 2022. Since the communities grant program is focused on named communities and the proposed utility-owned infrastructure program is also focused on named communities, PacifiCorp anticipates over 50% of the TE budget to be spent in named communities. Those two program applications are estimated to be around \$2 million dollars over the next five years.

Communities Grant Year 1 Year 2 Year 3 Year 4 Year 5 Total **Program** Incentives (Grants and Grant Writing) **Program Administration** Evaluation \$232,000 | \$152,000 \$1,246,000 **Total Program Costs** \$260,000 \$288,000 \$314,000

Table 4. Communities Grant Program Budget

⁷ The proposed budget has increased slightly from the estimated budget of \$1.13 million in the <u>September 28th, 2022 Addendum</u> to the TE Plan. This is due to additional costs being allocated to support administration of the grant program.

9. Learning Objectives

The Company's anticipated learning objectives from the Pilot are listed below. These may be updated during the planning and implementation phases of the Pilot, given potential input from stakeholders, implementers, and/or evaluators.

- Better understand customer barriers and opportunities in access EV technology
- Better understand customer barriers and opportunities in increasing customer owned EV infrastructure in named communities
- Identify utility best practices for increasing EV access through community grant programs
- Identify what types of projects are most utilized by customers
- Uncover learnings from grant project reports about what types of projects provided the most benefit to customers

10. Data Collection and Reporting

PacifiCorp will release periodic reports to TEP stakeholders focusing on major program progress or changes, expenses, and revenues, with the first report released in Q4 2023, which will be an interim report on progress to date of the TE plan activities. A more detailed report will be released by end-of-year 2025 and may include updates on EV adoption and forecasts by type, updates on load and grid impacts, product activities and progress, lessons learned, expenses to date, and cover comprehensively the last two years of the TE Plan. In 2026, another interim report will be released covering the previous year. By the end of 2027, PacifiCorp will deliver a final TE Plan report that will cover the last five years comprehensively as we also develop a new TE Plan.

Appendix A: Suggested Scoring Criteria

Table 5. Scoring Criteria

Categories	Subcategories
Community Ponofit	How many in the community will be served by the proposed project?
Community Benefit	What are the benefits for Named Communities?
Custoinobility	Lifetime of the project, can it be maintained?
Sustainability	Long-term adequate access to it in the future.
	Creative project design, partnerships, and utilization of resources, particularly serving
Innovation	underserved populations.
IIIIOVation	Likelihood of stimulating the electric mobility marketplace.
	Is the project innovative? Has this been done before?
Use of Funds	Applicant has internal financial commitment to match funds and/or leverages funds from other reliable sources.
	Reasonableness of the proposed budget.
Project	Reasonableness of the project plan and timeline.
Feasibility/Utilizati	Identified potential project barriers and demonstrated strategic response.
on	Readiness of the project team.
Additional Benefits	Proposed projects include commitment to community visibility and outreach to community about the project.
Additional benefits	Project expresses plans to expand upon the proposed project in the future.
	Educational benefits and opportunities.
	Detailed plan to directly address barriers to mobility for communities currently underserved
	by electric transportation (ex. Rural communities, low-income communities, low-medium
Equity	priced multi-family housing etc.)
Equity	Detailed methods within plan to ensure timely input and oversight from community members.
	Project is easily accessible to the surrounding communities.

Appendix B: Stakeholder Feedback

Item			
No	Category	Comment Provided	PacifiCorp Response
1	Overview	What types of outreach has PacifiCorp done for these draft programs and pilot applications? What types of feedback did PacifiCorp receive?	PacifiCorp worked directly with the Equity Advisory Group during the drafting and creation of the named communities grant program as well as the outreach and education program. Furthermore, the WUTC EVSE Stakeholder Group was consulted and informed during the development of these programs as well as the managed charging program. The programs were originally discussed and detailed in the Washington Transportation Electrification Plan approved by the Commission in in October 2022.
2	Overview	In PacifiCorp's TEP it noted that about a third of the budget is set aside for the named communities grant program and that more than 50% of investments from the TEP would serve named communities. Could PacifiCorp outline for staff how these objectives are being achieved with the current applications? Further could PacifiCorp outline how these applications compare to the \$3.5 million budget described in the TEP?	The communities grant makes up about 28% of the budget. While the proposed utility-owned infrastructure program makes up about 30% of the budget, these projects are meant to serve named communities and be placed in named communities. Those two programs applications are estimated to be around \$2million dollars over the next five years. The rest is planned for workplace and utility-owned infrastructure programs.
	Managed	Page 5, section 2.1, has PacifiCorp investigated any of the privacy concerns that might arise from this degree of control? Were any less invasive alternatives considered? Are there any other management techniques that might facilitate customers better managing charging on their own? Has PacifiCorp investigated any ways to mitigate or assuage privacy or control	PacifiCorp proposes the active managed charging pilot in an effort to add another "tool" in the flex load "tool chest" along with other demand response programs and a time of use rate pilot. Having flexible load with this degree of control is an important clean energy resource for PacifiCorp's Energy Supply Management and is a part of the specific actions proposed by Company's Clean Energy Implementation Plan. Please refer to WAC 480-100-610 (4)(a) for the mandate required of PacifiCorp to "pursue all cost-effective, reliable, and feasible conservation and efficiency resources and demand response." The Company has contemplated layering in behavioral / passive managed charging as a part of the pilot, as well, and anticipates working with the selected vendor to determine the most appropriate strategy. Among stakeholders and interveners, such as Northwest Energy Coalition and
2	Charging	concerns?	Verde, comments have been generally supportive, especially relating to
	CHAIRING	CONCENTIS!	verue, comments have been generally supportive, especially relating to

			the similar proposed program in PacifiCorp's Oregon Transportation Electrification Plan. The Company acknowledges the importance of customer privacy and would like to emphasize a number of points relating to the proposed pilot: First, the pilot will be voluntary. While the program will pay customers incentives in exchange for the right to actively control when their electric vehicle charges, it is possible that some customers will still not be comfortable with the concept. There will be no obligation for them to join the program. Additionally, participants will also still be able to opt out of a certain amount of the active management during the pilot and still be considered active participants who are eligible for incentive payments. They can also unenroll from the program altogether at any point; there will likely be no "clawback" of incentives in those cases. The program will also ensure minimum charging thresholds are maintained for all participating vehicles. A program webpage will display customer-facing program information and frequently asked
			questions outlining how the program will work and what customers are signing up for. Customers will also be required to agree to terms and conditions before enrolling. Second, the SEPA research cited in the program application suggests that other markets have been successful in running programs with similar designs: customers have willingly chosen to participate and, in some instances, have even over-subscribed. Similar programs are happening at PSE and Avista already in Washington. Finally, the Company has rigorous cyber security terms which define data protections for customers. The implementation vendor will have to agree to those before PacifiCorp will execute a contract.
4	Managed Charging	Page 7, section 2.4, subsection 3, there is a reference to "tailored program design" and "varying program design elements" Could you explain what PacifiCorp might have in mind? What variables is PacifiCorp considering?	The program elements referenced in that section which the Company and chosen vendor may tailor during the pilot include: telematics vs EVSE, incentive level, incentive method, incentive timing, and messaging. Please refer to page 19, section 9.

EV detection modeling is cost effective, accurate, and feasible at scale during the pilot. A number of vendors in this space offer this type of modeling as a service and conduct it for utilities at scale across North America, in compliance with data rules and regulations. This type of modeling is also similar to what is done by other DSM programs, such as Bring Your Own Device programs, and within other industries. The Company plans to do mass marketing for the program across the Washington service area and will look to leverage multiple inputs to drive results. Customers can opt out of the messaging if they choose and will be excluded from marketing if they are on the Do Not Contact list. Conducting data analysis to drive tailored marketing and outreach to promote DSM programs, in addition to or in conjunction with mass marketing, has helped meet increasing energy efficiency and demand response goals over the last decade or more. Finding out who owns an EV in the Company's Washington service area can help enhance marketing and could increase the speed of the program's adoption rate. While there are other sources of data about who owns an EV, Page 8, section 2.4, subsection 6, "EV detection modeling such as DMV data or data from third-party EV apps, there could be strategy developed." Is this type of detection consistent with inaccuracies about where charging occurs, and so having another data customer data privacy? Has PacifiCorp considered how source can help cross-verify findings. PacifiCorp aims to select a vendor customers might react to getting a notification about their EV if with a successful track record for implementing managed programs they never informed PacifiCorp? Is this a practice used by that meet objectives and maintain high levels of customer satisfaction PacifiCorp in other applications or by other utilities to detect EV and trust; PacifiCorp expects the selected vendor to have experience ownership? Has PacifiCorp investigated other means of locating messaging to end-customers and doing so in a way that minimizes Managed Charging EV drivers in its service territory? negative reactions when doing outreach.

PacifiCorp acknowledges the importance of customer privacy. Please see response to item number 3. While still being compliant with data privacy rules and regulations, PacifiCorp aspires to investigate whether

6	Managed Charging	Page 12, it states "PacifiCorp is planning to study the potential for managed charging on all three of these types of DR, which is one learning objective of the Pilot (Section 13)." How will this be experienced by program participants?	PacifiCorp aims to select a vendor with a successful track record for implementing managed programs that meet objectives and maintain high levels of customer satisfaction and trust. The program will ensure that minimum charging thresholds are met and that customers can easily override if needed. Ideally, from a customer perspective, participating in the program will become a "set it and forget it" experience: they plug in their vehicle when they get home from work and expect it to be charged and ready to use when they leave the next morning, regardless of whether that day PacifiCorp employed a load shed, shift, or shimmy strategy. The "shed" and "shimmy" type demand response events, which respond to frequency or contingency events could happen off peak, are generally rare, and commonly do not last more than 30-45 minutes. Validating this assumption and understanding whether these strategies are actually noticeably experienced by participants will be an important learning objective of the pilot.
7	Managed Charging	Page 14, Section 2.7, it states "residential-based, user-owned EVSE and vehicle telematics" has PacifiCorp investigated other customer types such as industrial or commercial managed charging? Or how community based organizations might take advantage of managed charging?	At this time, the pilot plans to focus on residential customers. Non-residential charging could be explored as a "phase 2" project after the initial pilot term, depending on how the customers use their EVs.
8	Managed	Page 15, section 2.8, it states "PacifiCorp expects that the majority of the Pilot's early adopters will be customers living in single-family housing, though it is also interested in exploring ways to reach and include customers living in multi-unit dwellings." Has PacifiCorp considered renters in single-family homes?	Yes. PacifiCorp believes that it will be reasonable to accommodate renters in single-family homes in the case that the renter has the electricity account with PacifiCorp and has access to / control over the EV charging at the home. The program webpage and materials can confirm those details for prospective customers. Customers living in multi-unit dwellings are likely to be harder to reach on the offset and one of the learning objectives will be to explore potential ways to allow them to participate in the program.
9	Communities Grant Program	Could PacifiCorp describe how it arrived at the budget size for this program?	PacifiCorp estimated funding three to five projects a year with a range of funds equaling about \$50-100k per project. From previous experience, average funding awards are around \$70-80k.

10	Communities Grant Program	Appendix A, Table 5, Staff appreciates the ambition reflected in the categories and subcategories for scoring. Could PacifiCorp provide more information on how this scoring rubric will be implemented? Are there objective bases for applying scores to various proposals that might be received?	The suggested scoring criteria was created in conjunction with the Equity Advisory Group (EAG) on how to best to award grant funds. The scoring rubric is meant to be used by a third-party grant evaluator when scoring each application. The third-party evaluators would be neutral third-parties reviewing grant applications providing objective analysis.
11	Overview	All three documents include tables with budget information. In the tables, the totals are shown, but not broken down by category (admin, incentives, etc.). Is this information known or still being sorted out? It's helpful to see all the numbers by category as well, so it would be great if you are able to include it.	PacifiCorp will file the budget information as both confidential and redacted. The filings will be filed under confidential protection. Both staff and public counsel are covered under statute and be available to review. NDAs will need to be signed with specific parties that want access to confidential information.
			PacifiCorp has gained several insights from reviewing PSE and Avista's outreach and education programs. Avista's partnership with the Spokane Public Library is similar to the Company's proposed dealership engagement program. PacifiCorp is aiming to have a similar type of partnership with the local dealerships in the Company's Washington service area that will empower the dealerships that the Company
		Regarding the Outreach and Education Program, I'm curious about how much your team has been learning from or adapting the methods used by either PSE or Avista in developing this program.	partners with EV educational trainings, materials and tools that will be similar to those provided to the Spokane Public Library by Avista. The Company believes that the resources provided will position dealership partners to be trusted advisors that customers can rely on for information about EV ownership, charging and available incentives.
		I'm glad to hear (and expected) that you'd reviewed PSE and Avista's outreach efforts. And I agree that Pac's territory in Washington is a bit unique, though Avista serves some more rural areas as well. Avista's recent annual report mentioned having a couple of displays in partnership with the Spokane Public Library, which seemed like an interesting approach to	PacifiCorp appreciates the comment regarding collaborative ride and drive events with Avista and local dealerships. The Company has had similar partnerships with Clark PUD for the last couple of years to offer EV education and test drives at the Portland Autoshow's Electric Avenue. The partnership has been mutually beneficial and collaborative outreach as proved to be a valuable way of stretching
12	Overview	consider. The other thought I had was about partnering up with Avista for ride or drive events with local dealerships. I grew up in a rural area where people would drive pretty far to check out a vehicle if it was the right make/model/price	outreach funds further. The Company plans to reach out to neighboring utilities to set up a meetings to discuss future engagement events and collaboration opportunities in the TE space moving forward.
13	Overview	Regarding the Managed Charging Program, the document mentions (p. 15) that PacifiCorp "will better define 'active enrollment' upon launch of the Pilot." Do you have a sense of	The Company aims to create an inclusive program that provides customers needed flexibility to override / opt out of active management, to use their vehicle at unexpected times. Allowing this

when you might have that term defined? The document also notes that there may be terms of the pilot that change—how will you work to make sure that customers understand/acknowledge that possibility?

As far as defining 'active enrollment,' maybe I'm not quite understanding why that term wouldn't be defined prior to the program being approved. Is the point that Pac isn't quite sure where the cutoff should be and needs more information from running the program? Key to me is communicating well to customers whatever the definition ends up being and that any changes to the definition would also be broadcast widely.

flexibility and paying incentives on an ongoing basis will be an important step towards the goal of earning customer trust in the program and it is the Company's expectation that the majority of participants will offer reliable load shift in exchange. On the other hand, the Company recognizes that there likely should be a minimum amount of ongoing participation for customers to be considered an "active" part of the program to ensure that there is still grid benefit in exchange for the incentive payments.

According to industry research, including by SEPA, other utilities running similar managed charging programs have defined "active participation" in various ways. Some base incentive payments on the amount of actual load shift performance, others have a "three strikes, you're out" rule on a monthly basis, while others use even different approaches. Given the wide array of options available, and an everevolving landscape, PacifiCorp is seeking further information before deciding exact structure. PacifiCorp plans to collaborate with the selected implementation vendor to decide the most appropriate method for defining this cutoff for "active enrollment." During the onboarding phase, the Company will conduct a thorough review of the implementation vendor's proposed options and recommended best practices, based on their experience running other managed charging pilots and programs, and make a decision that will work best. Once a vendor is selected to support program launch and implementation, PacifiCorp will file a tariff sheet explaining all the terms associated with the program for WUTC approval.

The comment about transparency is well received. PacifiCorp acknowledges that customers will need to understand what they are signing up for and how the incentives work. PacifiCorp plans to communicate the final definition clearly and openly to customers and potential participants via the Company's program website and other collateral, like an FAQ document, customer implementation manual, using plain language an average customer would be able to understand. Customers who sign up for the program will also need to read and agree to terms and conditions.

14	General	Staff appreciates that Pacificorp sought feedback on the three applications from the following sources: Equity Advisory Group, WUTC EVSE Stakeholder group, Flex Charging, and Public Counsel. Staff questions if Pacificorp could expand on lessons learned during the TEP drafting process to improve outreach within its service territory.	PacifiCorp appreciates this comment and will investigate opportunities on how to best improve outreach and lessons learned during the drafting of the next TEP.
15	General	Staff lauds Pacificorp for aiming to exceed the goal of 50% of investments from the TEP serving named communities. Staff questions if Pacificorp can present these budgetary goals and the intended flows of resources to named communities within the application documents.	PacifiCorp has added in a section in the named communities grant program application discussing the budgetary goals of spending in named communities.
16	General	Staff notes that the total TEP budget has expanded. Staff asks if Pacificorp could clearly communicate the expected TEP budget changes especially as they relate to the total budget within the application documents.	The overall TE budget was estimated at \$3.5 million over the next five years. The current proposed applications equal a proposed budget of \$2.3 million. The remaining funds are to support the future workplace/multifamily program as well utility-owned public infrastructure program. At this time, PacifiCorp anticipates a potential increase in the utility-owned public infrastructure program costs due to equipment cost increases. However, strategies can shift and allow PacifiCorp to stay within the \$3.5 million anticipated budget. At this time, PacifiCorp believes that the overall TE budget has not been exceeded.
17	Managed Charging	Page 5, section 2.1, Staff has reservations about degree and directness of control over the charging of customer vehicles. Staff would like to see assurances within the application that customers will be fully informed of the degree and directness of control over the charging of customer vehicles. Staff would like more clarity around customers' ability to override the managed charging. Staff would appreciate more clarity within the application on why this approach was chosen over other less invasive alternatives.	Please refer to the response to item number 3. The state of Washington's CETA rules obligate PacifiCorp to pursue all available, cost-effective flexible load.

18	Managed Charging	Page 7, section 2.4, subsection 3, there is a reference to "tailored program design" and "varying program design elements". Staff would appreciate more clarity in the application about what tailoring and variables the program will entail.	Please refer to the response to item number 4. As discussed earlier, PacifiCorp will be filing a tariff sheet in alignment with the managed charging upon vendor award. WUTC and stakeholders will have an opportunity to revisit the program eligibility requirements and parameters.
		Page 8, section 2.4, subsection 6, "EV detection modeling strategy developed." Staff questions if this strategy is consistent with the following statutes: RCW 19.29A.110: Persons—Customer information—Capture, obtain, or disclosure for commercial purpose—Requirements—Application of consumer protection act. (wa.gov)	Please refer to the response to item number 5 for discussion about EV detection modeling at a high level. The response to item number 3 also discusses data privacy.
		RCW 19.29A.100: Electric utilities—Customer information— Sale or disclosure—Requirements—Exemptions—Application of consumer protection act. (wa.gov) RCW 19.94.585: Charging session—Consumer data disclosure. (wa.gov)	Specific to this item, PacifiCorp conducted a preliminary review of the statutes cited in WUTC Staff's comment and the following represent the initial conclusions: RCW 19.94.585 Does not appear to be applicable as PacifiCorp does not sell the data and the Company is not considered an EVSP. RCW 19.29A.100 See subsection (5)(a), it appears it will not prevent a
		If this practice is consistent with law, Staff would appreciate greater clarification around the ethics of this strategy and the public interest. Staff wonders if PacifiCorp might investigate alternative strategies to contact EV owners in its service territory such as targeted Google or Facebook ads for users who search for EV related products or partnering with	third party from sharing information back to the customer. PacifiCorp will have a contract with a third party, in which it will be directly related to utility business and that has a provision that prevents disclosing or selling the data to any other entity. Additionally, Subsection 7 states that if the marketing material is provided in the billing package, the messaging is allowable.
19	Managed Charging	dealerships to sign up customers when they first purchase an EV.	RCW 19.29A.110 Appears to apply to persons, as opposed to electric utilities (see subsection (3)).
20	Managed Charging	Page 14, Section 2.7, it states "residential-based, user-owned EVSE and vehicle telematics". Staff would like clarity regarding whether participation by community-based organizations was considered as an option?	Please refer to the response to item number 7.

21	Managed Charging	Page 15, section 2.8, "PacifiCorp expects that the majority of the Pilot's early adopters will be customers living in single-family housing, though it is also interested in exploring ways to reach and include customers living in multi-unit dwellings." Staff lauds Pacificorp's goal to include multi-unit dwellings. Staff also supports Pacificorp's use of telematics to include renters who may not be able to physically modify their home with EVSE.	Please refer to the response to item number 8.
22	Managed Charging	Page 13, section 2.5 – "SEPA estimated that there are at least 22 'network service providers' active in providing the underlying software to enable the EVSE-driver interface, at least 42 EVSE manufacturers offering managed charging capabilities, and at least nine vehicle OEMs offering vehicle telematics capable of being applied to managed charging" Staff questions if the pilot might also be an opportunity to investigate interoperability and apply lessons to other related EV developments.	At this time, PacifiCorp does not see a direct link with the managed charging pilot and interoperability standards. However, PacifiCorp will work to make connections and bring out lessons learned as they unfold.
	Managed	Page 15, section 2.8 – "Customers likely will not need to be enrolled in a TOU rate in order to participate in the Pilot, though they would likely benefit financially from doing so." Staff would like clarification about the effectiveness of existing TOU rate programs, where they exist, and the expected	Beginning in May 2021, PacifiCorp launched residential and non- residential service time of use pilots. The residential pilot (Schedule 19) targets single family residential customers and is available for up to 500 customers on a first-come, first-served basis. As of May 2023, there are 23 Washington customers on Schedule 19. PacifiCorp is studying the efficacy of the TOU pilot. Managed charging will be another tool that allows the Company to further leverage the potential flexibility of charging loads. Customers will not be required to participate in the TOU rate, but will be an added option. See also the
23	Managed	benefits of managed charging over these other programs. Page 15, section 2.8 – "Ongoing incentive payments for continued active enrollment, paid one or more times a year, in the range of \$25 to \$100." Staff would like clarification about whether any other methods of incentivizing customers were considered.	response to item number 3. Yes. Please refer to the response to item number 4.

25	Managed Charging	Page 17, section 4 - "During the program design stage of the Pilot, the Company plans to explore the feasibility of offering incentive tiers based on income · The Pilot could explore how to engage with EV owners living in multi-unit housing" Staff is generally supportive of these measures and would like to see them explored more.	PacifiCorp appreciates the positive feedback on this item.
26	Managed Charging	Page 20, Section 12.1, table 4, – Staff would appreciate greater clarity regarding the anticipated values in the table.	PacifiCorp provided general budgetary information in light of sensitive market data. PacifiCorp will be filing both a redacted and confidential version of this program application.
27	Managed Charging	Further, Staff would like clarity around how the company anticipates customers who work nonstandard hours will participate	PacifiCorp aims to select a vendor with a successful track record for implementing managed programs that meet objectives and maintain high levels of customer satisfaction and trust. The Company would expect to work with the vendor during the onboarding phase to determine the strategy for reaching customers like the ones referenced in this comment. It may depend on these customers' typical charging habits, whether they have load that is available during the times it is needed for curtailment. It is possible that by staggering the off-peak charging and the testing of shedding and shimmying, these customers may end up being eligible to participate.
28	Managed Charging	Additionally, Staff would life clarification about whether the program applies to or considers customers who do not charge at their home, and other non-standard charging arrangements.	At this time, the pilot plans to focus on residential customers who charge their EV at home. Non-standard charging arrangements could be explored as a next phase after the pilot period is completed or via another program.
29	Communities Grant Program	Page 11, section 8, table 4. Staff would appreciate more clarity about the anticipated allocation of the budget between incentives, administration and evaluation. Further, Staff would appreciate more clarity around the ability of the grant program to scale up if it proves effective.	PacifiCorp will provide a confidential unredacted version for staff to review the anticipated allocation of incentives, administration and evaluation for each program application. To scale the future grant program, PacifiCorp can either shift funds from future programs (i.e. workplace/charging or utility-owned infrastructure) or PacifiCorp is planning to participate, at this time, in the WA Clean Fuels Program which will also add additional funds into the grant pool. PacifiCorp is currently a registered participant, however, 2023 is a compliance year and no credits are being sold and monetized at this time.

ole 5, Staff appreciates the ambition es and subcategories for scoring. Staff clarity on the steps of the approval criteria will be weighed.	conjunction with the third-party evaluator that will be leading this effort. Scoring criteria weightings will be discussed with EAG and others once the third-party evaluator is hired.
questions whether technical assistance	PacifiCorp agrees that Technical Assistance should be available to multi-family unit dwellings and will offer technical assistance to multi-family dwelling customers that are on both a commercial and/or residential rate.
	uestions whether technical assistance o multi-family units

		Incorporate a customer-friendly interface	
		A customer-friendly interface, available to customers via web	
		and/or as a stand alone mobile app, can best facilitate the	
		numerous customer interactions that we understand PacifiCorp	
		will seek from its implementation vendor. As a vendor that has	
		successfully co-branded web and mobile app interfaces on	
		behalf of the utilities we partner with, we have seen firsthand	
		that a customer-friendly interface can provide the following	
		functionalities which on the whole will maximize pilot	
		performance:	
		a. Maximized customer eligibility via a hardware-agnostic APIs	
		across a range of both vehicles and chargers;	
		b. Seamless 3-step program enrollment with guided	
		instructions	
		c. Customer transparency over the status of their EV battery	
		level and optimized	
		charging schedule, including the capability for a customer to set	
		their preferences for managed charging e.g. desired departure	
		time and battery level;	
		d. Customer control over charging if needed (e.g. temporarily	
		override active	
		managed charging or opt out of a DR event);	
		e. Detailed history of customer EV charging consumption, costs,	
		savings and incentives earned, along with direct payment	Design of the second se
		functionality for the customer to redeem/cash out any off-bill	PacifiCorp acknowledges this comment. The Company aims to select
		incentives; and	vendor with a successful track record for implementing managed
2	Managed	f. Behavioral nudges and messaging via mobile push	programs that meet objectives and maintain high levels of customer
2	Charging	notifications and/or pop-up messages.	satisfaction and trust.

İ		Optionally expand the size of the pilot.	
		We appreciate PacifiCorp's ambition to enroll between 5% and	
		15% of EV drivers in its service territory. However, given both	
		•	
		the continued growth of EVs in Washington State and the	
		proposed use of EV load detection modeling, we believe that	
		PacifiCorp will be positioned to achieve an even greater level of	
		enrollment. In addition, the benefits of a larger pilot are that	
		PacifiCorp will have a richer data set from which to derive	
		findings, the pilot size will increase excitement and awareness	PacifiCorp is not currently planning on putting a cap on enrollment
		for the program among customers, and every customer who	during the pilot. The 5-15% enrollment growth quoted in the program
		wishes to participate can do so. We would suggest that	application was for demonstrative purposes only. If the program
		PacifiCorp incorporate an optionality clause that can further	vendor acquires greater than 15% customer participation, nothing will
	Managed	increase the size of the pilot once the enrollment caps are	prohibit those additional customers from enrolling. The more
33	Charging	reached.	customers who participate, the higher the grid benefits will be.
		Develop checkpoints to increase the budget as needed.	
		Based on the pilot plan, we understand that PacifiCorp is	
		planning on a \$375K budget over the three years of the	
		program. We applaud PacifiCorp for incorporating a number of	
		advanced elements into the managed charging program,	
		including testing for "shimmy" EV response, developing EV load	
		detection, and proposing meaningful customer incentives. We	
		believe that if the budget were increased it would make it more	The budget provided by PacifiCorp is an estimated budget at this time.
		likely that the final program will be able to incorporate all of	The RFP process and procurement negotiation step will confirm the
		these components. In addition, this would create potential	final administrative budget needed to run the pilot in Washington.
	Managad		
2.4	Managed	space for the pilot to increase should the enrollment targets be	Then the program onboarding phase will confirm the final plan for
34	Charging	exceeded.	customer incentives.

	Managed	PacifiCorp should give consideration to ensuring that potential applicable fees for OEM connected services, which are a necessary precursor for a telematics-based managed charging program, do not pose a hurdle for customers to participate. The OEM fees can vary between free to over \$200 a year depending on manufacturer of the electric vehicle and whether the manufacturer offered free connectivity for a few years. While Section 12.2 explicitly states that participant costs are expected to be zero, some participants may need to activate their telematics for a fee before they are able to participate in	PacifiCorp acknowledges this comment. The Company will seek to understand the extent of the cost impacts of OEM API fees during the RFP and onboarding process, and will want to monitor these fees during the course of the pilot. The Company would expect the program to cover these costs, as opposed to the end-customer, so that there
35	Charging	this pilot program.	are no out-of-pocket costs to participate in the program.
		PacifiCorp may be able to push further from a perspective of enabling and quantifying greenhouse gas emissions savings. While the pilot assumes no ICE to EV conversions and therefore doesn't claim any of those fuel emissions savings, the shift in managed charging times may align with greenhouse gas emissions savings for the pilot. FlexCharging has integrated with WattTime to allow for managed charging based on emissions savings by using the day ahead hourly generation mix of power to quantify savings when charging patterns are shifted. The quantification of these savings may improve the business case for a future program while also allowing for greater customer satisfaction based on improved emissions. Specifically, after scaling a program, the reduction in CO2 emissions per vehicle will help PacifiCorp achieve Washington's CO2 reduction requirements without building new resources. Relatedly, offering customers an option to charge from their	PacifiCorp acknowledges this comment. Table 3 under Section 4 Performance Areas, outlined the metrics that the Company plans to track as part of the pilot. "Environmental Benefits" is the performance area most closely aligned with this comment. PacifiCorp will likely seek input from an evaluator to estimate these environmental impacts, one
	Managad	on-site DERs may also have both customer satisfaction and	of the pilot's learning objectives. Additionally, PacifiCorp will aim to
36	Managed Charging	emissions savings benefits, not to mention localized distribution system advantages.	select a vendor with a successful track record for supporting a 3rd party evaluation.
30	Charging	distribution system advantages.	party evaluation.

There are a variety of program design elements that can make for a better pilot by improving participant customers' experiences, which can improve expected outcomes related to customer enrollment, minimum percentages of charging load shifted to off-peak times, and continuous participation in the pilot throughout the pilot life. Having run managed charging programs across North America and Australia since 2018, FlexCharging would offer the following as critical elements for inclusion in an RFP for evaluating bids from EV telematics companies:

o Ensuring a smooth customer journey for EV drivers by focusing on the creation of an easy and quick enrollment process to better capture interested parties and translate those into ongoing participants.

o The user experience in terms of added battery drain through telematics access is not identified as a potential market barrier, but could have a detrimental effect on continued user participation. FlexCharging has developed a patented adaptive polling algorithm to ensure 15-minute interval data access for charging without contributing to appreciable range loss to customers participating in managed charging programs. Telematics companies should speak to their capabilities for minimizing vampire drain issues and this should be considered for part of the RFP evaluation criteria.

o Telematics companies should speak to their ability to work with a variety of customers that reflects the urban and rural nature of PacifiCorp's footprint, including on strategies for retention of participants.

o The EV telematics space is rapidly evolving, such that the capabilities of existing and future makes and models of EVs today may not be reflective of the state of affairs in the months and years to come. Given that this is a three-year pilot, the managed charging RFP should consider asking for details on EV telematics companies' respective roadmaps of increasing OEM/vehicle coverage as more capabilities become possible over time. This would allow PacifiCorp to consider expanding the initial program eligibility to a greater number of customers,

Managed Charging

37

PacifiCorp acknowledges this comment.

thereby increasing the robustness of data collected.

o Given that the cost savings from deferred maintenance of the distribution system is one of the goals that this pilot is looking to quantify, RFP respondents should be asked for their ability to

and experience with mapping customer charging stations to distribution substations.

o Data-driven analysis of the program impacts is critical for providing meaningful evaluation, measurement, and verification of the pilot. FlexCharging has the ability to support EM&V activities, particularly around counterfactual creations that we have developed and currently provide to support other managed charging programs. To better support the pilot's learning objectives, the RFP should consider asking respondents to speak to their experience providing quantitative support to better inform verification activities and ultimately actionable conclusions and recommendations.